



The winning Soviet speedway trio of (left to right) Vladimir Sukhov, Sergei Kazakov and Vladimir Lyubich.
Photo by Alexei Fyodorov

THE TOUGHEST COMPETITION YET

The USSR won the 4th team ice-racing championship in the old Russian town of Kalinin on the Volga. Featuring two days of exciting competition, the three-strong Soviet team achieved 57 points out of a possible 60. Renowned Vladimir Lyubich, Vladimir Sukhov and Sergei Kazakov were the fastest racers on the hard frost-bound ice, where the motorcycles' spikes found difficulty in gripping the treacherous surface.

Czechoslovakia came second with 48 points and Sweden third with 41 points, followed by Finland, Austria, the FRG, and Holland.

This was the third time Kalinin played host to such a spectacular event. In 1979 the first team event was held here, and

In 1980 an individual championship took place. The USSR won the 1979 event, and went on to win at Eindhoven, Holland, in 1980 and at Inzell, FRG, in 1981.

In conclusion, the USSR head coach, Sergei Storkh, remarked that despite their fourth successive win the USSR were up against the toughest opposition in years. Czechoslovakia and Sweden have always proved formidable rivals, he stressed, but Finland and Austria have improved no end, which was rather unexpected.

The event, which drew a crowd of 25,000 testifies to the growing popularity of the sport, and this will doubtless ensure the arrival of young talent on the scene, he emphasized.

HOSTS TOP

Matti Nykanen, from Finland, won the last gold medal during the Holmenkollen championship in Norway, completing the 90 m ski-jump event with jumps of 108.5 and 102.5 metres, which earned him 257.9 points. Second-placed Olaf Hansson, of Norway, totalling 255.1 points and Austrian Armin Kogler came third with 244.7 points.

A day before the jump event 22-year-old Yuri Biriakov, from Khabarovsk, who was making his first debut at a world championship, came second in the 50 km men's marathon only 33.4 seconds behind the winner and Olympic titlist, Tomas Wassberg, from Sweden. The bronze went to Lars Erik Eriksson, Norway.

The hosts were the top overall team, picking up seven gold, four silver and three bronze medals and, repeating the Soviet achievement of 1970. At the Strbske Pleso championship, Czechoslovakia, the USSR also gained ac-

ven golds though in fewer events. In Norway the USSR won two gold and three silver medals in skiing, while the jumps and Nordic event participants did poorly.

Over 300 entrants from 29 countries on four continents were taking part in these exciting and popular competitions.

CHESS HIGHLIGHTS

Jen Timman, of Holland, won an international tournament at Mar del Plata, Argentina, with 9.5 points, ahead of Lejos Portisch, of Hungary, having 8 points. World champion Anatoly Karpov shared third place with Lev Polugayevsky and American Yasser Seirawan, each achieving 7.5 points.

Yefim Geller is leading the USSR world chess championship zonal tournament in Yerevan, capital of Armenia, after eight rounds. At 57 he is the oldest contender.

SPARTAK-CAC NECK AND NECK

In the 37th round of the national ice-hockey championship Spartak only just crept through beating the Central Army Club, 5-4, and now drew

level with the former leaders holding 64 points each. The Orlov brothers and Kozhevnikov, Spartak's top attack trio, were the best.

GRETZKY THE RECORD BREAKER

Edmonton Oilers attacker, Wayne Gretzky, has broken an NHL record scoring his 77th goal of the season against Buffalo Sabres, and in only 64 games. The previous record of 76 goals to 78 games was set by celebrated Phil Esposito in the 1970-1971 season.

Gretzky, 21, also broke his own goal plus assist record of a year ago of 174 points.

The NHL season has not yet ended, and Gretzky still has time to improve on his achievements.

ALPINE CUP CONTINUES

After a long break the world skiing Alpine Cup got under way at Aspen, Colorado, USA, with the women's giant slalom event.

Brigitte Hoss, of Switzerland, who collected three top overall at the recent world championship at Schladming, Austria, justified her cup leadership by arriving second and totalling 277 points, while Irene Eppio, of the FRG, came third with a score of 257. The event was won by Irene's younger sister Maria, who has recovered from her injuries and proved highly successful during the latest events.

Switzerland's women have

stretched their team lead to 513 points, against 502 for the FRG and 501 for the USA.

The men's downhill races at Whistler Mountain, Canada, attracted only people specializing in this sport, while leaders Phil Mahre, USA, and Swede Ingemar Stenmark were participating in the parallel slalom event in Stockholm. Phil Mahre long ago precisely edged up his second successive cup title. The downhill winner Peter Mueller, of Switzerland, timed less than a second clear of the hosts Steve Podborski and Dave Irwin. Podborski leads the downhill overall ratings with 115 points.

TTT MAKES THE FINALS

The Riga TTT women's basketball club, many times European champion Cup winners, have won their second semi-finals game against Italian Cernice Pagnossin, 75-62, playing

in the town of Treviso and have qualified for the Cup finals.

Olyena Semyonova was the top Soviet scorer with 25 points.

URALOCHKA AND CAC IN THE LEAD

The Central Army Club vs Riga Aurora encounter, which the former won, 3-0, has wrapped up the first stage of the six-team final tournament for the women's national volleyball championship. Sverdlovsk Ura-

lochka beat Leningrad TTU, 3-1.

Uralochka and CAC share the lead following the Riga match with 14 points each; Moscow Dynamo has 10 points.

The next match is due in Sverdlovsk.



Moscow rugby clubs have long been looking forward to this year's capital's championship which traditionally inaugurates the new season. The first games were played on snow-covered pitches. The Slava vs MIPI college team encounter (photo) ended in a 35-3 win for the former.

Photo by Sergei Proskov



Vadim Borisov (upper) and Natalya Chmyryova, of the USSR, won the slaloms at an international tennis tournament in Moscow, which also drew contenders from Bulgaria, Hungary, Romania and Czechoslovakia.

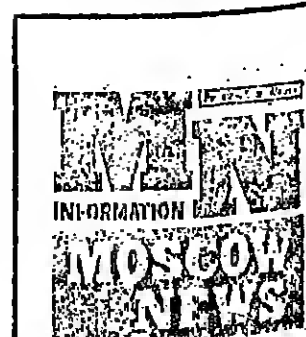


Photos by Andrei Golovinski

'HIMALAYAN' FEVER HITS THE WORLD

Altogether 34 mountaineering expeditions from various countries will attempt to scale the Nepalese Himalayas in the spring climbing season now only a few weeks away. A Soviet team will be making an attempt on the earth's highest peak, Mt Chomolungma (Everest, 8,848 m) along a yet unexplored route of the south-western side.

Japan will field 11 teams more than any other country, the Nepalese ministry of tourism reports. Nepalese climbers will take part in eight joint expeditions, and an all-Nepalese team is gearing up for an ascent of Mt Tilicho peak, 7,132 m high. Teams from Austria, Italy, Spain, Belgium, the USA and other countries are preparing for the assault.



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TWO SOVIET PROBES COMPLETE STUDY OF VENUS

Another area of Venus explored on March 5, 1982, when the descent module of the antiastronaut probe Venera-14 entered the Venarian atmosphere and soft-landed east of the Moebius region. It took a soil sample and carried out a direct analysis of the sample a thousand kilometres from the landing site of the Venera-13 descent module. New panoramic pictures of the Venarian surroundings have been transmitted back to the Earth.

The Venera-14 station was

launched into an interplanetary trajectory on November 4, 1981.

Much research was carried out during the module's flight in the Venarian atmosphere and at landing. Experiments were conducted with the aim of studying the chemical and isotopic composition of the atmosphere and of the clouds; the structure of the cloud layer, as well as of scattered solar radiation; and electric discharges in the atmosphere were registered.

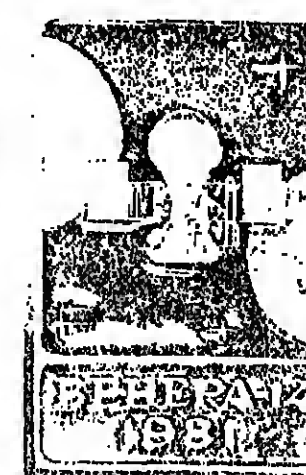
Scientific and technical experiments and investigations of the soil conducted in temperatures of 463 and at pressure of 94 atmospheres included the transmission of panoramic pictures of the surroundings taken through



The pennant carrying a Soviet pennant of Vladimir Lenin on board the Venera-14 station.

colour filters, as well as the measurement of electrical conductivity, of the physical and mechanical properties of the soil and the evaluation of the seismic activity of the planet. All the systems and instruments on board the descent module functioned successfully and proved highly reliable.

The information thus obtained has shown that the Venera-13 descent module landed on an an-



cient surface of the planet featuring lava flows rarely found on the Earth with traces of chemical erosion.

The measurements taken by the two modules in structurally and morphologically different areas of the Venarian surface under a single programme provided valuable information about Venus, the Earth's closest neighbour in the Solar system.



GRAND SPORTS SPECTACULAR IN SIBERIA

The finals of the 5th Soviet Nations Winter Tournament have begun in the city of Krasnoyarsk on the Yenisei River. The programme includes speed skating, skiing, Nordic combination, ski-jumping, luge, figure skating and Alpine skiing. The other tournament venues are the towns of Divnogorsk and Khatanga. The latter will host the luge and bobsleigh tournaments.

Approximately 4,000 entrants will compete in the modernized and new facilities built in Krasnoyarsk and Divnogorsk. The finals were preceded by mass nationwide competitions which drew millions of competitors of all ages. This is the biggest sports fixture yet to have been held in Siberia and the choice of this old city as a venue which stretches for dozens of kilometres along the Yenisei was no mere chance. One out of every three in-

(Continued on page 8)

WITH ALL ONE'S HEART

This is the name of an exhibition of souvenirs, presented to the 29th Congress of Soviet Communists and to Leonid Brezhnev, which is now on view at the Lenin Central Museum.

The 200 and more exhibits are a vivid illustration of the history of the land of the Great October, in the vast territory of the CPSU, of the unbreakable friendship of the peoples of the USSR and of the nations of the socialist community. That is reflected in works by artists from Bulgaria, Hungary, Vietnam, Cuba, Poland, Czechoslovakia, France, Finland and many other countries.

Presents from Cyprus, Sweden, Greece and from the World Federation of Trade Unions.

Photo by Boris Kaufman

TRADE UNIONS PREPARE FOR THEIR CONGRESS

* On March 5, the All-Union Central Council of Trade Unions met in Moscow for a plenary meeting.

* Those present discussed and approved a Council report to the 17th congress of Soviet trade unions.

* The trade union budget and the 1982 state social security budget were also discussed and approved.

* Stepan Shalayev was elected Council chairman. He was born in 1929. After graduating from the Moscow Forestry Engineering Institute, Shalayev worked as chief engineer of a timber logging organization. He occupied managerial posts at many such enterprises, and was chief expert on the State Committee for the wood, paper-and-pulp, timber and forestry industry of the USSR State Planning Committee.

In 1963 Shalayev was elected chairman of the Central Committee of the wood, paper-and-pulp and timber industry trade union, and in 1968 he became Council secretary. Since 1980 he has been minister for the wood, paper-and-pulp, timber and forestry industry of the USSR.

At the 28th Congress of the CPSU Shalayev was elected an Alternate Member of the CPSU Central Committee. He is also a deputy of the USSR Supreme Soviet.

MLADENOV IN MOSCOW

Soviet-Bulgarian relations in the political, economic and cultural fields and in the sphere of scientific research have been developing at an ever increasing level. This was stated by Andrei Gromyko, USSR Minister of Foreign Affairs, and Petr Mladenov,

his Bulgarian counterpart, at their talks in Moscow.

The talks reaffirmed the determination of the Soviet Union and Bulgaria to expand their bilateral cooperation and to reinforce the deepening alliance of the Warsaw Treaty member countries.



No other nation celebrates the 8th of March on the scale that you do here in the USSR, said an American tourist, Miss Henry, talking to our correspondent in the Moscow Kremlin. Miss Henry is on a 12-day tour of the Soviet Union, with a group of 20 mayors and municipal workers from Oregon. The group will also visit Leningrad, Tbilisi, Tashkent and Samarkand.

It would be nice if we in the States were to adopt this pleasant custom of giving women flowers and treating them in a very special way on this day, Miss Henry stressed.

NUCLEAR TURBINES FROM THE UKRAINE

A complex, which has recently gone into operation at the Kharkov Turbine Factory, in Kharkov, will make it possible to produce turbines rated at one rather than on the individual orders of nuclear stations.

The Kharkov factory has produced the first batch of unified assemblies for these turbines.

By making full use of new scientific achievements and having achieved a radical modernization in the manufacture of turbines in the current five-year plan of 1981-1985, the factory will increase twofold its output of equipment for nuclear power stations.



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Round the Soviet Union

● IN THE CAUCASUS MOUNTAINS, THE FIRST PYLONS HAVE BEEN ERECTED FOR THE 500-VOLT POWER TRANSMISSION LINE BETWEEN THE INGUI HYDRO-PROJECT AND THE STAVROPOL THERMAL POWER STATION. The line will cross the mountains at the height of 3,000 metres. The builders are greatly assisted by helicopters.

● A NEW ITINERARY WHICH INCLUDES HISTORICAL PLACES IN KIEVAN RUS HAS BEEN DEVISED BY THE UKRAINIAN COUNCIL FOR TRAVEL AND EXCURSIONS TO MARK THE FORTHCOMING 1,500th ANNIVERSARY OF THE CITY OF KIEV. The itinerary includes the magnificent towns of Kiev, Chernigov, Novgorod-Seversky, Pultiv, and Innely Pereslavl-Khmelnytsky.

● PREPARATIONS HAVE STARTED TO BUILD AN UNDERGROUND METRO SYSTEM IN THE LATVIAN CAPITAL RIGA. This ancient Baltic city has a population of 800,000, and in summer it is visited by as many tourists. This new transportation system is designed to relieve the present traffic congestion problems. The first 17-kilometre line will link the outskirts with the city centre, which has been declared an architectural preserve.

● THE AVTOZAP MOTOR WORKS IN ZAPOROZHYE IS ABOUT TO COMMENCE THE PRODUCTION OF AIR CONDITIONERS FOR LARGE LOBBIES. This year, it expects to produce 500 such devices for large trucks operating in open mines. Before this five-year plan is completed in 1985, the works will build a factory to manufacture air conditioners for lorries and buses of all Soviet makes.

SCHOOL FOR SIX-YEAR-OLDS

Though in the USSR school starts officially at the age of seven, for some years now many Soviet schools have run preparatory classes on an experimental basis for six-year-olds. These classes are designed to give children the opportunity of levelling off their previously acquired knowledge and to fill in any gaps in it left over from pre-school years. In addition, it gives teachers the opportunity of getting to know each child, and of determining his or her psychic and physical health.

The aim of the experiment, which is carried out under the guidance of the Scientific Research Institute of Educational Methodology and Standards at the Academy of Pedagogical Sciences,



Teacher Valentina Lesukova conducts a class.



Six-year-old Irina Baldyreva knows her alphabet well.

is to determine the possibilities for mass education of six-year-olds at secondary school level. It is already obvious that at six, children are capable of digesting much of the knowledge they would be taught their first year of school.

In a class, they are better learners than seven-year-olds. A special set of learning games and sets of textbooks have been compiled for six-year-olds and the Institute has already worked out a curriculum for them.

Pictured is a class of twenty boys and girls who started school at the age of six at the Chastobravskaya Secondary School in the Lipetsk Region of the RSFSR. The children, whose parents are members of the Zaval'skiy'skiy collective farm, study according to the new curriculum. They have a spacious classroom with numerous colourful teaching aids, a play corner, and a rest room. A special teacher supervises their play periods.

FUEL FROM THE KARAKUMS

The first cubic metres of natural gas from the new Karakum pipeline are now flowing through the Central Asia-Centre pipeline. Deep boreholes have been drilled among sand dunes, and processing facilities built to prepare the fuel for pipeline transport. Gas is now being produced not only in the Karakum but also in the sandy western plains of the Turkmen Republic.

The annual capacity of all the Republic's gas-producing complexes has exceeded 70,000 million cubic metres. It is planned to increase this volume of production by another 12,000 million cubic metres by the end of 1985. This calls for setting up new fields in difficult desert conditions, for constructing thousands of kilometres of pipelines and power transmission lines.

Forests for industry uses

Plantations of spruce for the pulp-and-paper industry have been laid out in the Gorky Region. 50 to 60 years should pass before the timber matures for use. Workers prepared 6,000,000 two-year-old spruce saplings for these plantations.

Forests can be cultivated faster by protecting the right-side light and heat regime, selecting the appropriate soil, organizing fertilization and thinning out the plants. Area was set aside for spruce plantations in the Kirovino, Gorko and Vologda-Udelskaya forests, which have long been famous for their coniferous forests. Already in the five-year period (1981-85) it is planned to lay out spruce plantations on 500 hectares annually. In the future, a highly productive forest will cover 40 thousand hectares.

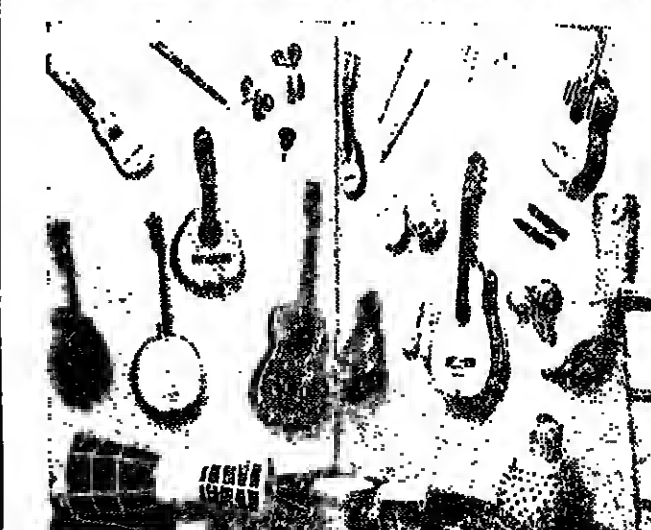
The plan is to set up a unified system in this area for supplying the Balaikha pulp and cardboard combine.

Places to visit

The Glinka Museum of Musical Culture has recently acquired some folk instruments from Latin America, Spain, and the islands off the west coast of Africa. They include the Colombian guitar, the Spanish bandurria. At present, there are nearly two and a half thousand instruments in the museum's collection, dating from the 13th and 14th centuries to the present day. Varying vastly in the ways they have been made, they all have something in common though they



M. Glinka Museum of Musical Culture



come from places as far afield as Russia, the Caucasus, the Kirgiz steppes.

The displays of balalaikas, of rare silver trumpets, and keyboard instruments are particularly popular with visitors in the museum. Numerous photographs, prints, paintings, theatre sets, and recordings by leading world soloists make up the rest of the collection.

Many famous musicians give recitals at the museum which is situated at 4 Georgievsky Pereulok, Moscow.

It is open daily, except Tuesdays, from 11 a.m. to 7 p.m. Mondays and Thursdays from 2 p.m. to 10 p.m.

MISLEADING BOOK-COVERS

"Never judge a book by its cover" is the saying, however covers of old books can sometimes prove more interesting than the content, according to researchers at the Kharkov Scientific Library in the Ukraine.

Its staff members noticed that some 17th-century books possessed unusual covers, made not out of wood or durable cardboard normally used during this period, but from several layers of paper glued together.

On gently removing the top layers they discovered that part of the covering consisted of sheet with Latin inscriptions. Subsequent research established them as places from the one of the early printed translations of Aristotle's books and identical to several parts of the "Physics" and "Ethics" published in Vienna in 1403.

MUSEUM ABOVE THE CLOUDS

The ancient Swan village Ushgull, in Georgia, has been declared a national monument of cultural and historical interest.

At 2,200 metres above sea level, the village is the highest populated point in Europe. The tiny stone towers which surround Ushgull are one thousand years old and compete in beauty and magnificence with the peaks of the Caucasus.

The buildings in the village are in quite good repair. When restoration work is completed, some of them will be turned into concert and exhibition halls or venues for local festivities.

Ushgull is also proud of its new architecture which includes a secondary school, creches for children, a trading centre and for visitors — a multi-floored tourist complex and an alpine camp.

MEDICINAL PLANTS

Collectors of medicinal plants have again taken off for the Siberian wilderness. Throughout the year they collect samples of excrements, a fungus growing on birch trunks, and birch and pine buds. During this time of the year the fungus is rich in oils and resin substances. The buds are taken from felled trees,

which also supply birch brooms. The Siberians store over 20 samples of large flora which contain medicinal properties. Many plants are found only in these parts and conservation methods are carefully practised. Researchers at the Irkutsk Medical Institute have located the resources of these wild medicinal plants.

CAVE BECOMES PROTECTED MONUMENT

The unique Amir-Temir Kurgeny cave in the spurs of the Zhetysay mountain range has been declared a protected monument. The cave has associations with Uzbekistan's history and with the name of the ferocious Temerlan whose troops left a noticeable impression on Central Asia. Historians

have drawn up a concise description of the fortified remains of the campment and of the cave's graves which were adapted into living quarters. In Uzbekistan more than four hundred natural landmarks have been put under state protection, and many underground places will be included on this year's tourist routes.



Hunting with falcons, hawks, martlets and golden eagles is an ancient sport still practised in Kirghizia. It is an accepted right for a horse-riding in the mountains to gallop by with a bird perched on his outstretched arm. A golden eagle whose wings span two and a half metres is capable of even attacking a strong wild goat.

A hunting bird is trained from a very early age, even before its feathers are properly formed. There is a special school in the republic which trains both hunters and their golden eagle companions in this ancient sport.

In the photo: following a successful hunt, a hunter offers his golden eagle a warm tea.

Science and technology

A NEW MINERAL: YAKUTITE

This has been discovered by the geologist A. Kurev and over its name to the location of the discovery, Yakutia. It will soon be entered officially in the register of the world's minerals.

Siberian geologists have for a long time viewed with interest a cluster of mountains on the border of the Yakut Autonomous Republic and the Irkutsk and Chita regions. Several years ago a deposit of Chacrolite, a uniformly coloured semi-precious stone (it is ilmenite), was discovered here not far from the route of the Baidar-Amur Railway.

Yakutite is black, and is found under iridium ground.

Experts claim that the mineral's considerable deposits can be used for making alumina and potassium fertilizer. Continued prospecting will determine the economic outlook of developing this deposit in the zone of the BAM project.

BUILDING ON SAND

Is this possible? Of course, plain scientists in Minsk, Uzbekistan. They have suggested using pyramid-shaped piles when building in sand deserts. Such piles will serve as solid foundations and the initial experiment will take place with the building of a chicken factory. The new method will later be employed in other projects.

ELECTRONIC TAGS FOR ANIMALS

Scientists at the Kharkov Electronics Institute have devised a new method of branding animals.

They suggested placing into animals' ears special integrated circuits in the tablet-like packages. These circuits do not bother the animals and emit radio signals at a set frequency. A small device placed at a distance receives and decodes the information, instantly recording on a display the animal's number. Such individual tags can be fitted to a herd of 10,000 beasts.

This device will form part of a computerized system for registering various animal characteristics, making it possible to immediately determine the weight and size of an animal, the thickness of its fat layer, and other valuable data.

LOW-GRADE BAUXITES PUT TO GOOD USE

Aluminium is smelted from bauxites, or, to be more precise, from the alumina contained in bauxites. This is possible providing that there is a high concentration of alumina in the bauxites. Otherwise, the mineral is regarded as worthless.

Recently the Institute of Metallurgy and Metal Refinement at the Kazakh Academy of Sciences has suggested a method for low-grade bauxite processing providing high-quality alumina as well as rare metals and sodium sulphate.

The new technology was introduced at the Pavlodar Aluminium Factory. It incorporates many useful and previously unknown processes in the field.

VIEWPOINT

A FEMALE CAREER THROUGH A TIMEPIECE

Larisa KUZNETSOVA, author and social scientist

At one of his Cambridge lectures, the late Lord Snow, the English scientist and writer, said that the West was making a serious mistake by refusing to recognize that women were capable of a scientific career and thus reducing by half the inflow of potential talent. In the USSR things are very different: here two out of every three research workers are women. By comparison, the latest data available for the USA shows that only 0.2 per cent of all scientists are women. It should be emphasized that Soviet women-scientists are not only involved in the traditionally female areas of science such as biology, medicine or education; they are equally successful in thermodynamics, nuclear fusion, in space biology, mathematical physics, in philosophy and genetics. About 4,000 major industrial enterprises are run by women while every second public health, catering or trade establishment is also under female direction.

An age of scientific and technological revolution is characterized by the swift growth in the volume of information; this requires that one should continually "refresh" and deepen one's knowledge. Let us consider a female career through the glass of a timepiece: whatever their educational standards or however strong their craving for a career, almost all women (thank God!) have children, and spend a large share of their time with them. Thus, a tug-of-war takes place: should a woman acquire more knowledge (improve her qualifications) or take care of her children.

Sociological research has revealed that the number of years a woman spends on her studies is a function of how many children she has. Out of 100 women, 28, having no children, continue their studies; this figure drops to 13 in the case of mothers of one child; to 8 for mothers of two children; to 6 for mothers of three and to only 0.8 for mothers of four and more children. Married men account for 35 to 50 per cent of the enrolment figures for evening and extramural courses run by establishments of higher education, while married women, only few of which have children, account for only 2 to 8 per cent.

All talk of a female career is apt to be a rather complex and elusive subject. Today the women have entered the world of work which for many centuries was closed to her. The logic of social development under socialism inevitably leads a woman towards the summit of her career. Yet, there is an obstacle hidden in the woman herself which requires a special approach. This could be termed as the "female nature", above all her life-giving function. This means that in order to compete on an equal basis with men in the business world a woman should be given privileged conditions.

The lot of laws protecting maternity and childhood in the USSR go a long way towards creating such conditions. Recently these laws have supplemented by an additional condition which considerably extends the right to a working woman and that helps her to combine her family and professional functions with greater success.

FROM THE SOVIET PRESS

THE UKRAINE'S IMPORTANCE IN THE COUNTRY'S ECONOMIC SYSTEM

The Ukraine's economy plays an ever increasing role in the total economy of the USSR. A. Vaitchenko, President of the Ukrainian SSR Supreme Soviet, writes in IZVESTIA.

In fact, over the past ten years the volume of industrial output in this republic has grown by 72 per cent. Today the Ukrainian industrial production is 3.5-fold greater than that for the whole of the USSR in 1940. Agricultural production went up by three times as compared with the pre-revolutionary time.

The Ukrainian production potential totals more than 150 industries, including mighty metallurgy, many branches of engineering, large-scale shipbuilding, the highly developed chemical, light and the food industry. On top of this, the Ukraine is one of the country's largest grain producers. Of over 1,000 people engaged in the Ukrainian economy 813 possess higher or secondary education, and one of every three people studies. The republic justly boasts of 200 thousand research workers.

OCEANS: A 'WEATHER CAULDRON'

Scientists have long been treating the oceans as a "weather cauldron" ascribing its especially important role in the formation of atmospheric process, writes Academician Leonid Bikhovskiy in the VOZDUSHNY TRANSPORT newspaper.

Yet, the oceans have an inadequate number of weather stations assigned to them. Although we are now assisted by space observations, it is not enough for long-range forecasting. The amount of available data concerning the oceans constitutes only one-thousandth of our knowledge about the atmosphere.

We must efficiently employ the little evidence we have, the author continues, by revealing the most important elements in the complex ocean to atmosphere interaction.

At least one step has been made in this direction. We now know that certain zones of the World Ocean create a greater impact on regionally linked weather.

In its simplified version, if you wish to determine the weather over the European USSR in two months' time you should note the present weather conditions in the Atlantic near Iceland. If you want to obtain a forecast four months in advance, you should study the weather over the Caribbean.

The oceans isolate many such zones. The task is to specify them with greater precision and to correlate their effect upon the land regions.

At present this problem is being seriously studied in the USSR, under a group headed by Academician Gury Marchuk under the programme entitled the "Cross-Sections". This name results from the fact that to obtain a forecast you should receive a cross-section of sorts of a relevant part of the ocean. The scientists believe that weather ships will aid the accuracy of forecasting, especially if it continues to develop on an international basis.

THE POSITIVE SIDE OF NUCLEAR POWER

Generation of electricity has become the only large-scale application of nuclear energy, writes from Yemelyonov, Corresponding Member of the USSR Academy of Sciences, in LITERATURNAYA GAZETA. However, it can have many other uses, particularly the generation of heat energy. We have already gained considerable experience in this field. In Billings, in the north, we have built atomic plants which both produce electricity and heat the city. Similar experience has been accumulated at the Belyarskoye station. Preparations in the cities of Gorky and Veronesh, which will be commissioned by 1985.

Temperatures of 150°C necessary for comfortable heating of homes are readily obtainable of existing nuclear plants. Now researchers are busy designing nuclear heat plants capable of providing temperatures of 100 to 1,500°C, which are essential for chemical, metallurgical and other processes.

One may be confident that nuclear power is becoming a major source of energy, providing many advantages. At the same time its development will certainly pose new problems and create new demands. This, however, is the dialectic of progress in science and technology.

RESPECT FOR ONE'S ELDERS NOT OUT-OF-DATE

Is it true that traditional "folk pedagogics" are no longer needed and that they should be relegated to the archives? The Kirgiz writer Chingiz Alimov answers this question in the KOMSOMOLSKAYA PRAVDA newspaper.

There is no simple straightforward answer here: it is quite certain that the influence of our elders, and especially of our grandfathers, is beneficial to us all.

In ancient times, every Kirgiz was expected to remember the names and deeds of all his forefathers down to the seventh generation. The feeling that one forms a link in a succession of past generations is important not only for an individual, but for the entire generation. During the war, my younger brother, lights, was a postman. A twelve-year-old boy, he had to deliver KIA notices. He did not, however, have to break the news himself according to ancient custom; this duty was performed by the older members of the community. The latter were given many other useful tasks, and in carrying them out they showed wisdom and social discretion. Such qualities, brought a positive influence to bear on the upbringing of young people.

One cannot but approve of the way people living in remote mountain areas still heed the advice of their old and timble their best qualities. May the Kirgiz be respected in similar fashion in villages in the Volga Region and in Byelorussia. "Folk pedagogics" is based on respect for one's elders. Personally, I do not see anything patriarchal or archaic in this respect.

Theatre, Cinema and TV Stars



Lyudmila Savelyeva

Having acted in just one role Lyudmila Savelyeva became a "star". And what a role! She was asked to play Tolstoy's Natasha in "War and Peace". Hundreds of actresses had dreamed of acting the part in Sergei Bondarchuk's film. Savelyeva, however, had no such dreams. Having graduated from the Vaganova Ballet School, she had just been accepted into the Kirov Opera and Ballet Company, one of the best in our country. Here she danced Giselle, a role not always entrusted to debutantes. Fully content with her lot, she saw her future mapped out before her. But this was before she entered the arena. By chance, the young ballerina became involved in a Lenfilm production. By chance, Sergei Bondarchuk happened to see the rushes. And this was how the unknown, nineteen-year-old Lyudmila Savelyeva came to be Natasha.

Bondarchuk's film progressed triumphantly across the screens of the world. But once the prizes, award-giving ceremonies and first nights were behind her—what now awaited Savelyeva? To return to ballet was out of the question—a ballerina must practise every day and Savelyeva hadn't been near the bar for six years... She might renege in the cinema perhaps. True, she had a mass of offers. But to follow on from such a major role as that of Natasha was difficult. Insignificant parts were out of the question. For three long years Savelyeva waited. She kept herself busy at home, looked after her young daughter, who was called... Natasha.

The three-year wait paid off. Savelyeva played her second role in Vittorio De Sica's neorealistic classic of a film "Sunflower". Here she acted opposite Sophia Loren and Marcello Mastroianni.

Later Savelyeva, as particular as ever, was to wait for even longer periods between films—for the right role to lure up. She played Serafina in the screen version of Mikhail Bulgakov's play "Flight" by the well-known film directors Alexander Alov and Vladimir Naumov. She played Nina Zarechnaya in Chukhvat's "The Sea Cut" made into a film by Yuri Karasik. And she played Julia Vrozhskaya in the film of the same name. In the latter movie she was a high society beauty who voluntarily gave up her glittering Petersburg life to become a nurse in a field hospital. The action of the film takes place during the Russian-Turkish war of 1877-1878 when Russia helped Bulgaria to rid itself of its Turkish overlords.

We got used to seeing Lyudmila Savelyeva in the roles of women of past centuries. But not long ago she surprised us with two new movies: "The Hat" and the TV film "From Evening to Midday". In the latter two films she acts the parts of contemporary women who love but whose love is unreturned. If the two roles are perhaps somewhat similar to each other, they are utterly unlike anything that Savelyeva has attempted before. The actress takes on completely new colours in these parts. And who knows, there may be further surprises in store. We have to be grateful that Lyudmila Savelyeva did not remain an actress, however brilliant, of a single role.

Tatyana SAVITSKAYA

FACTS AND EVENTS

Exhibitions, Jasper and male-chile masterpieces made by Russian stone-cutters have formed a display in Chelyabinsk that features exhibits from the State Hermitage Museum. The visitor sees genuine objects of the late 17th-century. Russian decorative and applied art. Also included are samples of "furniture made after the famous Carlo Rossi and the first productions of the national china industry."

Films. The film "A Flying Grenade" will be shown in Oberhausen during the International festival of short films. The granddaddy in question is 70-year-old Leonid Velitsky who lives in Gorky, swimming in ice-cold water, skillfully makes best shoes and pilots a hang glider. He is, in general, an outstanding specimen of the Russian people.

Chkhikvadze's King Lear

The great Ramez Chkhikvadze, whose outstanding performance as Richard III in Shakespeare's tragedy of the same name made him world famous, is now working on the part of King Lear. The new production will be by Robert Sturua, chief director of Tbilisi's Rustaveli Theatre.

Sturua is known for his original interpretations of classical drama, in particular of plays by Shakespeare and Brecht. His work is well known in Lithuania, Yugoslavia, Britain, Greece, Italy, Switzerland and France, where the Rustaveli Theatre company has been on tour.

In his new production, too, Sturua has dispensed with a traditional approach to Shakespeare's works. Making use of contemporary means of eloquence and of a new genre, a synthesis, according to some critics, of opera, operetta and drama, he has made music the distinctive emotional pivot of the production. Composer is Giga Kancheli. The Rustaveli Theatre will take its new production to Argentina this spring.

King Lear is Ramez Chkhikvadze's 150th role in the theatre and cinema. The 50-year-old actor, who is distinguished by his striking artistic individuality and talent, has been compared by British critic Michael Coveny with Laurence Olivier. At present Chkhikvadze is working on a new film version of Brecht's play, "The Caucasian Chalk Circle", at the national film studios.



"The Music of Blue Well" is another book in the "Library for Teenagers" series, which was launched four years ago by the Molodaye Gvardiya Publishers. The new collection contains stories about the life of teenagers from Norway, Sweden, and Denmark. The authors are Torborg Nedrehaug, Astrid Lindgren, and Torg Skov-Hansen.

The book contains rather interesting illustrations drawn by K. Sushinskaya. Two of these drawings we depict here.



BLOK ON STAGE

The famous Russian poet, Alexander Blok, his attitude to the world, people, poetry and art—is the subject of a play, "Here, on the Blue Earth", which has been staged at the small stage of the Moscow Film Actors Workshop. The cast has two characters: Ilo and Sho. He is the poet, Natalya Volokova, she is in Pletskaya. The play, written by Vladimir Ilo and the role of Volokova, Yulena Morozova, she is the play.

19th-CENTURY RUSSIAN ARTISTS DISPLAYED IN THE FRG

The Kunsthalle Museum in Baden-Baden, FRG, has displayed an exhibition of 30 Russian artists from the first half of the 19th century.

160 paintings and exhibits were loaned from the Moscow Tretyakov Picture Gallery and other Soviet museums.

Many FRG newspapers carry similar comments. "We know Old Russia thanks to its literature. We had practically no idea about its painting and drawing before this exhibition," said "Appenzeller Anzeiger". The "Landesbergblatt" stressed that the exhibition in Baden-Baden led to a greater understanding of the East and West.

The exhibition has travelled to Hanover, Spole, the opening. Mr. Hans Gmünder, the Director of the Lower Land Museum, expressed great satisfaction that the exhibition would help FRG to learn something about the artists of this period, covered in West Germany.



"The Anthology of Zarzuela", as is named a musical review, is a collection of Spanish songs, experienced a great success in Moscow. The audience enjoyed pieces by Spanish composers as well as popular folk dances and songs. The Spanish company is now holding concerts in Leningrad. In the photo: Curra Jimenez, a soloist of the dance group.

WHAT'S ON?

March 6-12

THEATRES

Kremlin Palace of Congresses (Kremlin), 6 (mat), 7 (eve), 8 (eve), 9 — Concerts by the "Choreographic Miniatures" Ballet Ensemble from Leningrad. 8 (mat) — Gyrowetz, Cesta, "Nobility" (ballet) performed by the Moscow Classical Ballet Ensemble. Bolshoi Theatre performances: 6 (eve) — Adam, "Ciselle" (ballet). 7 (mat) — Khabakuriya, "Cayenne" (ballet).

Bolshoi Theatre: Sverdlov Shy, 6 — Wagner, "Das Rheingold" (opera), 7 (mat) — Musorgsky, "Boris Godunov" (opera), 7 (eve) — Concert by Soviet young opera soloists, 8 (mat) — Tchaikovsky, "Eugene Onegin" (opera), 8 (eve) — Prokofiev, "Romeo and Juliet" (ballet). 9 — Dargomyzhsky, "The Stone Guest" (opera), 10 — Verdi, "Requiem", 11 — Shostakovich, "Dead Souls" (opera).

Opera Theatre (Kropotkinskaya St.), 6 — Kalam, "Violetta de Montmartre" (mat) — Double-bill: "Carmen" — "Phocion" (opera). 7 (mat) — Khrennikov, "Children of Beckery" (one-act). 8 (eve) — Milyuk, "The Flurry", 8 (mat) — "Khotibych" 8 (eve) — Klovsky, "Quadrille".

FILMS

Mechanic Geym's (Mosfilm Studios), USSR. "A lyric comedy" — the popular actress Gurchukova. Cinema: "Zaryanka" — Vorelskaya Embankment. "Ploshchad Nogin". Guys (Mosfilm Studios). About a man who went to his native village in the absence of his wife. Adopted three orphans. Cinema: "Forma" — Sukharevskaya St. "Mozhaya".

OPTICS SERVES MAN

Exhibitions showing the latest achievements in the optical industry have become a regular feature of Soviet international exhibition programmes. Expo-82 of the USSR Chamber of Commerce and Industry is the organizer of the third such display "Optics in the Service of Science, Industry, Culture and Everyday Life" which is on at present at the Krasnaya Presnya Exhibition complex.

About 260 companies and organizations from Austria, Great Britain, India, Italy, Canada, the USSR, the USA, France, West Germany, Switzerland, Sweden, Japan and West Berlin, together with some other countries are taking part, their stands occupying an area of 4.5 thousand square metres.

The USSR is represented by Mashpriborintorg. Of late optics has found many new applications in research, development, advertisement and in the home. The "Optica-82" exhibition features spectral, gas-dielectric, laser and refractometric instruments as well as infrared vision devices, test and measuring and other equipment.

Visitors will be shown microscopes and instruments for the analysis of structural properties, including acoustic microscopy and holography. Lasers, photo and cine technology, test cameras and film decoders, hard-copy units, fibre optic links and other new products in the field will also be on view.

This exhibition, experts believe, will make it possible to assess the present state of optical technology and to determine its future trends.



"Optica-82" is the photo: on one of the exhibition stands.

Photo by Gennadiy Dinekovsky

The exhibition will be supplemented by lectures and reports. It will provide an excellent opportunity for negotiations and an exchange of information.

Flora ABDRAHIMOVA

PLOVDIV FAIR

About 500 firms from more than 40 countries will take part in the second International spring fair in Plovdiv, Bulgaria. The fair, which specializes in consumer goods, will take place on May 3-8. This news was revealed at a press conference held at the Bulgarian Trade Representation Office in Moscow. Bulgaria will display its latest achievements in light, the chemical and other consumer goods industries, said Bulgaria's trade representative in the USSR, Bulgaria produces over 20,000 different consumer goods, some of which are exported to almost 60 countries. Over recent years more than 120 Bulgarian products won gold medals at international exhibitions and fairs.

The Soviet Union, with 14 foreign trade associations exhibiting their goods will be the biggest participant in the fair. A prominent place in the Soviet display will be taken by Turkmenia, one of the Soviet Central Asian republics.

CHEAP AND ECONOMICAL

An international car fair has taken place in Lima. It was attended by 21 countries, including the USSR, Brazil, Britain, Spain, Italy, USA, France, the FRG, and Japan.

Experts have acknowledged that the Soviet Zaporozhets was the cheapest and most economical car on display, and consequently many were sold while the fair was in progress.

EXHIBITIONS

Exhibition Hall, USSR Academy of Arts (21 Kropotkinskaya St.). An exhibition of sketches for stage-sets of Russian and Soviet classics by set-designer Alexander Vasilyev. Daily, except Monday, noon to 7 p.m. On Sunday noon to 5 p.m. Metro Kropotkinskaya.

Exhibition Hall, Moscow Nature Protection Society (53 Kutuzovskiy Prospekt). Bunches of flowers, still-life studies and ornaments made from natural materials such as straw, autumn leaves and poplar down are among some of the items on view at an exhibition entitled "The Decorative Penel". Daily from 11 a.m. to 8 p.m. Metro Arbatnaya. Trolleybus 2, Bus 107.

CONCERT HALLS

Lenin Central Stadium, Palace of Sport, 6, 7, 8, 9 — "Variety Networks" featuring Samostavly formers of Moscow. All days at 3 p.m. and 7.30 p.m. Metro Sportivnaya.

Druzhba Sports Gym. Lenin Central Stadium, 8, 9, 10 — Leaders pop group (Yugoslavia). On 8th at 7.30 p.m. On 9th and 10th at 3 p.m. and 7.30 p.m.

SPORTS

ICE HOCKEY
Krylya Sovetov Palace of Sport (10 Tolbukhina St.), 6 — Dynamo (Moscow) v. Ishtetel. At 1 p.m. Krylya Sovetov v. Torpedo. At 5 p.m.

Lenin Central Stadium, Small Sports Arena, 9 — Central Army Club v. Torpedo (Gorky). At 1 p.m. Spartak v. Army Club (Leningrad). At 6.45 p.m. (both days).

BASKETBALL
Dynamo Palace of Sport (10 Lavchinskaya St., USSR men's championship, Dynamo (Moscow) v. Stroitel (Kiev). At 7 p.m.

DIVING
Olimpiyskiy Swimming Pool (Molot Prospekt (Miro), 11, 12 — "The Spring Swallows" international tournament. At 11 a.m. and 6 p.m. (both days).

WEATHER

March 6-12

In Moscow, city and region slight coolness in the next day. SW wind will change to N, bringing colder temperatures to its wake, with night temperatures down to -15°C during the day. No precipitation expected during the rest of the period. Beginning on March 8 temperatures will start climbing up to +5°C during the day.

State Bank of the USSR

Some foreign exchange quotations for March 1, 1982		Quotations in roubles	
Currency			
Austrian schilling	100	4.33	
Canadian dollar	100	58.56	
Swiss franc	100	5.93	
English pound sterling	100	131.44	
Finland mark	100	15.93	
French franc	100	15.93	
FRG mark	100	36.32	
(Deutsche mark)	100	36.32	
Indian rupee	100	7.29	
Norwegian krone	100	11.95	
Swedish krone	100	12.43	
Swiss franc	100	58.56	
US dollar	100	71.36	

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INDIA AND THE CMEA COUNTRIES

The Indian paper "Ananta Bazar Patrika" is deeply satisfied with the unwavering progress of commercial contacts between India and the countries of the socialist community.

The newspaper notes that over recent years the share of the socialist countries in the total volume of commercial contacts concluded by India with foreign countries has grown considerably. The CMEA countries now

account for 12 per cent of the imports and 14 per cent of India's export deals. According to the paper, the leading place in India's trade with the socialist countries is held by the Soviet Union, its major trade partner. Trade relations between India and socialist countries are based on respect, equality and reciprocal benefits, the paper made a point of stressing.

Intourist news

GREAT TRAVEL OPPORTUNITIES

Representatives from "American Express", the largest tourist agency in the United States which specializes in the promotion of international travel links, became tourists themselves recently on a visit to the USSR. The American travel agency went to Leningrad and Moscow, in Moscow the Intourist travel agency arranged a seminar at which their overseas colleagues were told about Intourist activities and informed of commercial conditions and of new tourist itineraries in the USSR.

We highly value, out there with our traditional partners, and Intourist vice-president Alexander Basadina. We have been cooperating for almost half a century. During this time, thanks to the activity of "American Express" which has an office of its own in Moscow, many

thousands of American tourists have visited the USSR and have become acquainted with the life of the Soviet people.

Despite the difficulties now being experienced by Soviet-American relations, Intourist has been making efforts to expand tourist exchange with the USA.

In 1981 alone "American Express" arranged tours in the Soviet Union for 1,200 travellers from the USA. This year there will be an increase in tourist exchange, 85 per cent of all the tours, however, stick to the traditional routes which include Moscow and Leningrad. Intourist is at present suggesting to their American colleagues that they widen the scope of their tours to embrace 148 towns and cities in the 15 constituent republics.

Handwritten text: 1982/03/15/16